



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/821,922

04/12/2004

Naofumi Tamai

1081.1198

2421

21171

7590

08/24/2005

STAAS & HALSEY LLP

SUITE 700

1201 NEW YORK AVENUE, N.W.

WASHINGTON, DC 20005

EXAMINER

BELLO, AGUSTIN

ART UNIT

PAPER NUMBER

2633

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/821,922

Applicant(s)

TAMAI, NAOFUMI

Examiner

Agustin Bello

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Yoo (U.S. Patent No. 6,519,062).

Regarding claims 1 and 8, Yoo teaches a WDM network system comprising: an optical wavelength division multiplexed (WDM) transmission path (reference numeral 204 in Figure 4); a plurality of sub-networks each having an IP address (inherent in the use of IP routers, IP headers and IP labels throughout) and accommodating a client (reference numeral 102 in Figure 4); and a plurality of WDM nodes (reference numeral 114 in Figure 4) each corresponding to each of the plurality of sub-networks respectively and connected with the optical wavelength division multiplexed transmission wherein each of the plurality of WDM nodes comprises a wavelength converting unit (reference numerals 12 and 18 in Figures 2 and 3) controlling oscillation frequencies in conformity with an IP address of a destination network (see Figures 22) and a cross-connecting unit (reference numeral 16 in Figure 2 and 3) for cross-connecting the route directed to an adjacent WDM node to communicate with the destination subnetwork.

Regarding claims 2 and 9, Yoo teaches that each of the WDM nodes includes a routing table (column 9 lines 5-58) for storing the IP address of the corresponding sub-network, a WDM

Art Unit: 2633

node of an upper order of the sub-network, a cross-connection ID identifying the path, a wavelength used and information of the WDM node to which the main signal is first sent when reaching the target sub-network using a predetermined path, and wherein the control of the oscillation frequency by the wavelength converting unit and the cross-connecting of the route are conducted by referring to the routing table (column 9 lines 19-24 and column 10 line 59 – column 11 line 2, reference numeral 322 in Figure 21).

Regarding claims 3 and 10, Yoo teaches that when an IP address of a sub-network in which a client is accommodated is notified from the client issuing a request for connection, the corresponding node registers the IP address of the sub-network into the routing table (inherent in the header that is stripped off via element 1302 in Figure 21), and wherein each WDM node exchanges the IP address information of the sub-network retained in the routing table with adjacent nodes (column 8 lines 33-39 and via DCN from NC&M to the network elements column 9 lines 19-38).

Regarding claims 4 and 11, Yoo teaches that the oscillation of wavelengths and settings of cross-connection are started/ended and defined/erased in response to the occurrence/disappearance of traffic from sub-network (inherent in that the conversion of wavelengths and switching of the wavelengths via the optical cross-connect is based on the traffic of the subnetwork).

Regarding claim 5 and 12, Yoo teaches the wavelength converting unit executes one-to-multiple communication by converting a wavelength into a plurality of wavelengths in response to a request for connection from one (1) client (as seen in Figure 11 wherein wavelength 1 is converted via WC1 to a number of different wavelengths).

Regarding claims 6 and 13, Yoo teaches a plurality of selectable paths are set in a cross-connection ID identifying the path of the routing table (e.g. "forwarding table" throughout), with the priority being registered for each path (column 8 lines 40-41).

Regarding claims 7 and 14, Yoo teaches the priority is set based on the quality of the WDM signal at the receiving terminal (column 12 lines 1-13) and can be updated in response to disconnection or recovery of the path (column 9 lines 30-35).

Response to Arguments

3. Applicant's arguments filed 2/16/05 and 3/16/05 have been fully considered but they are not persuasive. The applicant argues that Yoo fails to teach that each of the plurality of subnetworks has an IP address. However, it is clear from Yoo's numerous disclosures of IP routers, IP headers and IP labels throughout that each subnetwork operates according to an IP protocol, in which case each subnetwork would be assigned an IP address.

Next, the applicant argues that the node of Yoo fails to control the oscillation frequencies to conform with an IP address of a destination. However, the opposite is true. Given the broadest reasonable interpretation, Yoo does control the oscillation frequencies to conform with an IP address of a destination in that Yoo converts the wavelengths of the signals to achieve contention resolution at the destination. As such, it is clear that the IP address of the destination is taken into consideration in that the signal sent to the IP destination is made to conform with the limits of the IP destination in terms of contention of signals going to the same destination. A decision whether or not to invoke wavelength conversion is based on what is happening at the IP destination address, and therefore, the node of Yoo controls the oscillation of frequencies to conform with what is occurring at the IP address of the destination. The applicant is strongly

encouraged to review Figures 22 of Yoo as well as the specification of Yoo for disclosure of how and for what reasons wavelength conversion occurs in Yoo. Upon doing so, it will become clear that the oscillation frequencies are made to conform with an IP address of a destination.

In response to the applicant's argument that Yoo fails to teach a routing table that stores the IP address of the corresponding subnetwork, the directs the applicant to the previously cited column 9 lines 5-58, which in no uncertain terms recites a "routing table." Given the IP nature of communications among subnetworks, it is clear that Yoo's disclosed routing tables store the IP address of the corresponding subnetwork.

Finally, the applicant argues that Yoo fails to disclose that a plurality of selectable paths are set with a priority set for each path. However, Yoo explicitly recites through out that priority is taken into account for each path and further discloses the concept of preferred paths and alternate paths. Furthermore, Yoo discloses that statistics are kept as to the priority of the path taken by a packet as it traverses the network (column 9 lines 5-58; see also Figures 22).

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 2633


however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agustin Bello whose telephone number is (571) 272-3026. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AB


AGUSTIN BELLO
PATENT EXAMINER